

Complete Summary

GUIDELINE TITLE

Diagnosis and management of foodborne illnesses: a primer for physicians.

BIBLIOGRAPHIC SOURCE(S)

Diagnosis and management of foodborne illnesses: a primer for physicians. MMWR Recomm Rep 2001 Jan 26; 50 (RR-2): 1-69. [95 references]

COMPLETE SUMMARY CONTENT

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METHODOLOGY - including Rating Scheme and Cost Analysis

RECOMMENDATIONS

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BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

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INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT

CATEGORIES

IDENTIFYING INFORMATION AND AVAILABILITY

SCOPE

DISEASE/CONDITION(S)

Foodborne illnesses ("foodborne illnesses" include any illness that is related to food ingestion; gastrointestinal tract symptoms are the most common clinical manifestations of foodborne illnesses).

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Treatment

CLINICAL SPECIALTY

Emergency Medicine
Family Practice
Infectious Diseases
Internal Medicine
Pediatrics
Preventive Medicine

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

To help physicians in the prevention and control of food-related disease outbreaks by providing practical and concise information on the diagnosis, treatment, and reporting of foodborne illnesses.

TARGET POPULATION

Infants, children, adolescents and adults

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis

1. Differential diagnosis:
 - Evaluation for signs and symptoms
 - Duration
 - Associated foods
 - Evaluation for underlying medical conditions (e.g., irritable bowel syndrome, inflammatory bowel disease, Crohn's disease)
2. Microbiology testing:
 - Stool cultures
 - Blood cultures
 - Direct antigen detection tests and molecular biology techniques

Treatment

1. Supportive care
2. Oral and/or intravenous hydration, with fluid +/- electrolyte replacement
3. Gastric lavage
4. Pharmacotherapy (penicillin, ciprofloxacin, erythromycin, trimethoprim-sulfamethoxazole, ampicillin, gentamicin, rifampin, doxycycline, tetracycline, quinolones, bismuth sulfate, metronidazole, iodoquinol, spiramycin, pyrimethamine, sulfadiazine, methylene blue, atropine, antihistamines)

Surveillance and Reporting

1. Report potential foodborne illness
2. Contact local or state health department with specific notifiable disease
3. Report increases in unusual illnesses, symptom complexes, or disease complexes to public health authorities
4. Follow the most current information on food safety

MAJOR OUTCOMES CONSIDERED

Disease outbreaks

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Please note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary. The recommendations that follow are based on the previous version of the guideline.

Diagnosing Foodborne Illnesses

Differential Diagnosis

If any of the following signs and symptoms occur, alone or in combination, laboratory testing may provide important diagnostic clues (particular attention should be given to very young and elderly patients and to immunocompromised patients, all of whom are more vulnerable):

- Bloody diarrhea;
- Weight loss;
- Diarrhea leading to dehydration;
- Fever;
- Prolonged diarrhea (3 or more unformed stools per day, persisting several days);
- Neurologic involvement such as paresthesias, motor weakness, cranial nerve palsies;
- Sudden onset of nausea, vomiting, diarrhea; and/or
- Severe abdominal pain.

In addition to foodborne causes, a differential diagnosis of gastrointestinal tract disease should include underlying medical conditions such as irritable bowel syndrome; inflammatory bowel diseases such as Crohn's disease or ulcerative colitis; malignancy; medication use (including antibiotic-related *Clostridium difficile* toxin colitis); gastrointestinal tract surgery or radiation; malabsorption syndromes; immune deficiencies; Brainerd diarrhea; and numerous other structural, functional, and metabolic etiologies. Consideration also should be given to exogenous factors such as the association of the illness with travel, occupation, emotional stress, sexual practices, exposure to other ill persons, recent hospitalization, child care center attendance, and nursing home residence.

The table below presents a list of etiologic agents to consider for various manifestations of foodborne illnesses.

Clinical Presentation	Potential Food-Related Agents to Consider
Gastroenteritis (vomiting as primary symptom; diarrhea	Viral gastroenteritis, most commonly rotavirus in an infant or Norwalk-like virus in an older

also may be present)	child or adult; or food poisoning due to preformed toxins (e.g., vomitoxin, Staphylococcus aureus toxin, Bacillus cereus toxin) and heavy metals.
Noninflammatory diarrhea (acute watery diarrhea without fever/dysentery; some cases may present with fever) *	<p>Can be caused by virtually all enteric pathogens (bacterial, viral, parasitic) but is a classic symptom of:</p> <ul style="list-style-type: none"> • Enterotoxigenic Escherichia coli • Vibrio cholerae • Enteric viruses (astroviruses, caliciviruses, enteric adenovirus, rotavirus) • Cryptosporidium parvum • Cyclospora cayetanensis
Inflammatory diarrhea (invasive gastroenteritis; grossly bloody stool and fever may be present) **	<ul style="list-style-type: none"> • Shigella species • Campylobacter species • Salmonella species • Enteroinvasive Escherichia coli • Enterohemorrhagic Escherichia coli • Vibrio parahemolyticus • Entamoeba histolytica • Yersinia enterocolitica
Persistent diarrhea (lasting ≥ 14 days)	Prolonged illness should prompt examination for parasites, particularly in travelers to mountainous or other areas where untreated water is consumed. Consider Cyclospora cayetanensis, Cryptosporidium parvum, Entamoeba histolytica, and Giardia lamblia.
Neurologic manifestations (e.g., paresthesias, respiratory depression, bronchospasm)	<ul style="list-style-type: none"> • Botulism (Clostridium botulinum toxin) • Organophosphate pesticides • Thallium poisoning • Scombroid fish poisoning (histamine, saurine) • Ciguatera fish poisoning (ciguatoxin) • Tetrodon fish poisoning (tetrodotoxin) • Neurotoxic shellfish poisoning (brevitoxin) • Paralytic shellfish poisoning (saxitoxin) • Amnesic shellfish poisoning (domoic acid) • Mushroom poisoning • Guillain-Barré Syndrome (associated with infectious diarrhea due to Campylobacter jejuni)

Systemic illness	<ul style="list-style-type: none"> • <i>Listeria monocytogenes</i> • <i>Brucella</i> species • <i>Trichinella spiralis</i> • <i>Toxoplasma gondii</i> • <i>Vibrio vulnificus</i> • Hepatitis A virus
<p>* Noninflammatory diarrhea is characterized by mucosal hypersecretion or decreased absorption without mucosal destruction and generally involves the small intestine. Some affected patients may be dehydrated because of severe watery diarrhea and may appear seriously ill. This is more common in the young and the elderly. Most patients experience minimal dehydration and appear mildly ill with scant physical findings. Illness typically occurs with abrupt onset and brief duration. Fever and systemic symptoms usually are absent (except for symptoms related directly to intestinal fluid loss).</p> <p>** Inflammatory diarrhea is characterized by mucosal invasion with resulting inflammation and is caused by invasive or cytotoxigenic microbial pathogens. The diarrheal illness usually involves the large intestine and may be associated with fever, abdominal pain and tenderness, headache, nausea, vomiting, malaise, and myalgia. Stools may be bloody and may contain many fecal leukocytes.</p>	

Clinical Microbiology Testing

Stool cultures are indicated if the patient is immunocompromised, febrile, has bloody diarrhea, has severe abdominal pain, or if the illness is clinically severe or persistent. Stool cultures are also indicated if many fecal leukocytes are present, which indicates diffuse colonic inflammation and is suggestive of invasive bacterial pathogens such as *Shigella*, *Salmonella*, and *Campylobacter* species, and invasive *Escherichia coli*. In most laboratories, routine stool cultures are limited to screening for *Salmonella* and *Shigella* species, and *Campylobacter jejuni/coli*. Cultures for *Vibrio* and *Yersinia* species, *Escherichia coli* O157:H7, and *Campylobacter* species other than *jejuni/coli* require additional media or incubation conditions and therefore require advance notification or communication with laboratory and infectious disease personnel.

Stool examination for parasites generally is indicated for patients with suggestive travel histories, who are immunocompromised, who suffer chronic or persistent diarrhea, or when the diarrheal illness is unresponsive to appropriate antimicrobial therapy. Stool examination for parasites is also indicated for gastrointestinal tract illnesses that appear to have a long incubation period. Requests for ova and parasite examination of a stool specimen will often enable identification of *Giardia lamblia* and *Entamoeba histolytica*, but a special request may be needed for detection of *Cryptosporidium parvum* and *Cyclospora cayetanensis*. Each laboratory may vary in its routine procedures for detecting parasites so it is important to contact your laboratory.

Blood cultures should be obtained when bacteremia or systemic infection are suspected.

Direct antigen detection tests and molecular biology techniques are available for rapid identification of certain bacterial, viral, and parasitic agents in clinical specimens. In some circumstances, microbiologic and chemical laboratory testing of vomitus or implicated food items also is warranted. For more information on laboratory procedures for the detection of foodborne pathogens, consult an appropriate medical specialist, clinical microbiologist, or state public health laboratory.

Treating Foodborne Illnesses

Selection of appropriate treatment depends on identification of the responsible pathogen (if possible) and determining if specific therapy is available. Many episodes of acute gastroenteritis are self-limiting and require fluid replacement and supportive care. Oral rehydration is indicated for patients who are mildly to moderately dehydrated; intravenous therapy may be required for more severe dehydration. Because many antidiarrheal agents have potentially serious adverse effects in infants and young children, their routine use is not recommended in this age group.

Choice of antimicrobial therapy should be based on:

- Clinical signs and symptoms;
- Organism detected in clinical specimens;
- Antimicrobial susceptibility tests; and
- Appropriateness of treating with an antibiotic (some enteric bacterial infections are best not treated).

Knowledge of the infectious agent and its antimicrobial susceptibility pattern allows the physician to initiate, change, or discontinue antimicrobial therapy. Such information also can support public health surveillance of infectious disease and antimicrobial resistance trends in the community. Antimicrobial resistance has increased for some enteric pathogens, which requires judicious use of this therapy.

The following tables summarize diagnostic features, laboratory testing and treatment for bacterial, viral, parasitic, and noninfectious causes of foodborne illness. (Note: To print the following large tables, users may have to change their printer settings to landscape, print on legal size paper, and/or use a small font size.)

Foodborne Illnesses (Bacterial)

Etiology	Incubation Period	Signs and Symptoms	Duration of Illness	
Bacillus anthracis	2 days to weeks	Nausea, vomiting, malaise, bloody diarrhea, acute abdominal pain.	Weeks	

Bacillus cereus (diarrheal toxin)	10 to 16 hours	Abdominal cramps, watery diarrhea, nausea.	24 to 48 hours	M C S
Bacillus cereus (preformed enterotoxin)	1 to 6 hours	Sudden onset of severe nausea and vomiting. Diarrhea may be present.	24 hours	I r c r
Brucella abortus, Brucella melitensis, and Brucella suis	7 to 21 days	Fever, chills, sweating, weakness, headache, muscle and joint pain, diarrhea, bloody stools during acute phase.	Weeks	F c f l r c r
Campylobacter jejuni	2 to 5 days	Diarrhea, cramps, fever, and vomiting; diarrhea may be bloody.	2 to 10 days	F l f l

				r c v
Clostridium botulinum children and adults (preformed toxin)	12 to 72 hours	Vomiting, diarrhea, blurred vision, diplopia, dysphagia, and descending muscle weakness.	Variable (from days to months). Can be complicated by respiratory failure and death.	f f a i c c f c f h c k a c k f f f (c
Clostridium botulinum infants	3 to 30 days	In infants younger than 12 months, lethargy, weakness, poor feeding, constipation, hypotonia, poor head control, poor gag and suck.	Variable	f c v f

Clostridium perfringens toxin	8 to 16 hours	Watery diarrhea, nausea, abdominal cramps; fever is rare.	24 to 48 hours	N C P f
Enterohemorrhagic Escherichia coli (EHEC) including Escherichia coli 0157:H7 and other Shigatoxin-producing Escherichia coli (STEC)	1 to 8 days	Severe diarrhea that is often bloody, abdominal pain and vomiting. Usually little or no fever is present. More common in children younger than 4 years.	5 to 10 days	l k l r r v s s c c v
Enterotoxigenic Escherichia coli (ETEC)	1 to 3 days	Watery diarrhea, abdominal cramps, some vomiting.	3 to more than 7 days	v c v f
Listeria	9 to 48 hours	Fever, muscle aches,	Variable	F

monocytogenes	<p>for gastrointestinal symptoms, 2 to 6 weeks for invasive disease.</p> <p>At birth and infancy.</p>	<p>and nausea or diarrhea. Pregnant women may have mild flu-like illness, and infection can lead to premature delivery or stillbirth. Elderly or immunocompromised patients may have bacteremia or meningitis.</p> <p>Infants infected from mother at risk for sepsis or meningitis.</p>		C L r i p r e h
Salmonella species	1 to 3 days	Diarrhea, fever, abdominal cramps, vomiting. Salmonella typhi and Salmonella paratyphi produce typhoid with insidious onset characterized by fever, headache, constipation, malaise, chills, and myalgia; diarrhea is uncommon, and vomiting is usually not severe.	4 to 7 days	C e L r c c r v (r s e c f c c s s f
Shigella species	24 to 48 hours	Abdominal cramps, fever, and diarrhea. Stools may contain blood and mucus.	4 to 7 days	F c v r l t s c t

				F f k v v s
Staphylococcus aureus (preformed enterotoxin)	1 to 6 hours	Sudden onset of severe nausea and vomiting. Abdominal cramps. Diarrhea and fever may be present.	24 to 48 hours	l c r e c
Vibrio cholerae (toxin)	24 to 72 hours	Profuse watery diarrhea and vomiting, which can lead to severe dehydration and death within hours.	3 to 7 days. Causes life-threatening dehydration.	(v s v
Vibrio parahaemolyticus	2 to 48 hours	Watery diarrhea, abdominal cramps, nausea, vomiting.	2 to 5 days	l r s s
Vibrio vulnificus	1 to 7 days	Vomiting, diarrhea, abdominal pain,	2 to 8 days; can be fatal in	l r

		bacteremia, and wound infections. More common in patients who are immunocompromised, or in patients with chronic liver disease (presenting with bullous skin lesions).	patients with liver disease and the immunocompromised	e c c s c e s
Yersinia enterocolytica and Yersinia pseudotuberculosis	24 to 48 hours	Appendicitis-like symptoms (diarrhea and vomiting, fever, and abdominal pain) occur primarily in older children and young adults. May have a scarlatiniform rash with Yersinia pseudotuberculosis.	1 to 3 weeks	l p u r c v h i c h c t

Foodborne Illnesses (Viral)

Etiology	Incubation Period	Signs and Symptoms	Duration of Illness	As For
Hepatitis A	30 days average (15 to 50 days)	Diarrhea; dark urine; jaundice; and flu-like symptoms, (i.e., fever, headache, nausea, and abdominal pain).	Variable, 2 weeks to 3 months	Sh ha cc w pr ur ar fo nc af w fo
Norwalk-like viruses	24 to 48 hours	Nausea, vomiting, watery, large-volume diarrhea; fever rare.	24 to 60 hours	Pe sh to

				to in w s cc
Rotavirus	1 to 3 days	Vomiting, watery diarrhea, low-grade fever. Temporary lactose intolerance may occur. Infants and children, elderly, and immunocompromised are especially vulnerable.	4 to 8 days	Fe cc fo ea to in w fr
Other viral agents (astroviruses, caliciviruses, adenoviruses, parvoviruses)	10 to 70 hours	Nausea, vomiting, diarrhea, malaise, abdominal pain, headache, fever	2 to 9 days	Fe cc fo ea to in w sh

Foodborne Illnesses (Parasitic)

Etiology	Incubation Period	Signs and Symptoms	Duration of Illness	Ass Foc
Cryptosporidium parvum	7 days average (2 to 28 days)	Cramping, abdominal pain, watery diarrhea; fever and vomiting may be present and may be relapsing.	Days to weeks	Cor wat veg frui unp mill

Cyclospora cayetanensis	1 to 11 days	Fatigue, protracted diarrhea, often relapsing.	May be protracted (several weeks to several months)	Impericonazole
Entamoeba histolytica	2 to 3 days to 1 to 4 weeks	Bloody diarrhea, frequent bowel movements (looks like Shigella), lower abdominal pain.	Months	Fecundazole
Giardia lamblia	1 to 4 weeks	Acute or chronic diarrhea, flatulence, bloating.	Weeks	Dried ointment
Toxoplasma gondii	6 to 10 days	Generally asymptomatic, 20% may develop cervical lymphadenopathy and/or a flu-like illness. <u>In immunocompromised patients:</u> central nervous system (CNS) disease, myocarditis, or pneumonitis is often seen.	Months	Accidental consumption of contaminated food (e.g. undercooked meat) or contact with contaminated soil

<p>Toxoplasma gondii (congenital infection)</p>	<p>In infants at birth</p>	<p>Treatment of the mother may reduce severity and/or incidence of congenital infection. Most infected infants have few symptoms at birth. Later, they will generally develop signs of congenital toxoplasmosis (mental retardation, severely impaired eyesight, cerebral palsy, seizures) unless the infection is treated.</p>		<p>Pas mo acq infe pre chil</p>
<p>Trichinella spiralis</p>	<p>1 to 2 days to 2 to 8 weeks</p>	<p>Nausea, vomiting, diarrhea, abdominal discomfort followed</p>	<p>Months</p>	<p>Rav unc con</p>

		by fever, myalgias, periorbital edema.		me: por gar e.g mo
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Foodborne Illnesses (Non-Infectious)

Etiology	Incubation Period	Signs and Symptoms	Duration of Illness	A: Fo
Antimony	5 minutes to 8 hours; usually <1 hour	Vomiting, metallic taste.	Usually self-limited	M cc
Arsenic	Few hours	Vomiting, colic, diarrhea.	Several days	Co fo
Cadmium	5 minutes to 8 hours; usually <1 hour	Nausea, vomiting, myalgia, increase in salivation, stomach pain.	Usually self-limited	Se oy lo pe
Ciguatera fish poisoning (ciguatera toxin)	2 to 6 hours	Gastrointestinal: abdominal pain, nausea, vomiting, diarrhea.	Days to weeks to months	A la Gi sr ar ba cc
	3 hours	Neurologic: paresthesias, reversal of hot or cold, pain, weakness.		
	2 to 5 days	Cardiovascular: bradycardia, hypotension, increase in T wave abnormalities.		

Copper	5 minutes to 8 hours; usually <1 hour	Nausea, vomiting, blue or green vomitus.	Usually self-limited	MCC
Mercury	1 week or longer	Numbness, weakness of legs, spastic paralysis, impaired vision, blindness, coma. Pregnant women and the developing fetus are especially vulnerable.	May be protracted	Fetal growth failure
Mushroom toxins, short-acting (museinol, muscarine, psilocybin, coprius artemetaris, ibotenic acid)	<2 hours	Vomiting, diarrhea, confusion, visual disturbance, salivation, diaphoresis, hallucinations, disulfiram-like reaction, confusion, visual disturbance.	Self-limited	W (cnc th)
Mushroom toxin, long-acting (amanita)	4 to 8 hours diarrhea; 24 to 48 hours liver failure	Diarrhea, abdominal cramps, leading to hepatic and renal failure.	Often fatal	M
Nitrite poisoning	1 to 2 hours	Nausea, vomiting, cyanosis, headache, dizziness, weakness, loss of consciousness, chocolate-brown colored blood.	Usually self-limited	Cu ar cc fo ex ni
Pesticides (organophosphate s or carbamates)	Few minutes to few hours	Nausea, vomiting, abdominal cramps, diarrhea, headache, nervousness, blurred vision, twitching, convulsions.	Usually self-limited	Ar cc fo
Puffer Fish (tetrodotoxin)	<30 minutes	Paresthesias, vomiting, diarrhea, abdominal pain, ascending paralysis, respiratory failure.	Death usually in 4 to 6 hours	Pl

Scombroid (histamine)	1 minutes to 3 hours	Flushing, rash, burning sensation of skin, mouth and throat, dizziness, urticaria, paresthesias.	3 to 6 hours	Fi tu m m m
Shellfish toxins (diarrheic, neurotoxic, amnesic)	Diarrheic shellfish poisoning (DSP)-30 minutes to 2 hours	Nausea, vomiting, diarrhea, and abdominal pain accompanied by chills, headache, and fever.	Hours to 2-3 days	A st pr m oy sc st th ar M
	Neurotoxic shellfish poisoning (NSP)-few minutes to hours	Tingling and numbness of lips, tongue, and throat, muscular aches, dizziness, reversal of the sensations of hot and cold, diarrhea, and vomiting.		
	Amnesic shellfish poisoning (ASP)-24 to 48 hours	Vomiting, diarrhea, abdominal pain and neurological problems such as confusion, memory loss, disorientation, seizure, coma.		
Shellfish toxins (paralytic shellfish poisoning)	30 minutes to 3 hours	Diarrhea, nausea, vomiting leading to paresthesias of mouth, lips, weakness, dysphasia, dysphonia, respiratory paralysis.	Days	Sc m cc
Sodium fluoride	Few minutes to 2 hours	Salty or soapy taste, numbness of mouth, vomiting, diarrhea, dilated pupils, spasms, pallor, shock, collapse.	Usually self-limited	Di as flc pc m cc w

				flu cc in rc
Thallium	Few hours	Nausea, vomiting, diarrhea, painful paresthesias, motor polyneuropathy, hair loss.	Several days	Co fo
Tin	5 minutes to 8 hours; usually <1 hour	Nausea, vomiting, diarrhea.	Usually self- limited	M cc
Vomitoxin	Few minutes to 3 hours	Nausea, headache, abdominal pain, vomiting.	Usually self- limited	Gi w bæ
Zinc	Few hours	Stomach cramps, nausea, vomiting, diarrhea, myalgias.	Usually self- limited	M cc

Surveillance and Reporting of Foodborne Illnesses

The following lists current reporting requirements for foodborne diseases and conditions in the United States. National reporting requirements are determined collaboratively by the Council of State and Territorial Epidemiologists and the Centers for Disease Control and Prevention (CDC).

Notifiable BACTERIAL Foodborne Diseases and Conditions

- Botulism
- Brucellosis
- Cholera
- Escherichia coli O157:H7
- Hemolytic uremic syndrome, post-diarrheal
- Salmonellosis
- Shigellosis
- Typhoid fever

Notifiable VIRAL Foodborne Diseases and Conditions

- Hepatitis A

Notifiable PARASITIC Foodborne Diseases and Conditions

- Cryptosporidiosis
- Cyclosporiasis
- Trichinosis

In the United States, additional reporting requirements may be mandated by state and territorial laws and regulations. Details on specific state reporting requirements are available from the:

- Council of State and Territorial Epidemiologists. Information is available electronically at <http://www.cste.org/reporting%20requirements.htm>.
- Centers for Disease Control and Prevention. Morbidity and Mortality Weekly Report [1999;48(21):447-448]. This information is available electronically at <http://www.cdc.gov/epo/mmwr/preview/mmwrhtml/mm4821a4.htm>. (General information is available at the Centers for Disease Control and Prevention, National Center for Infectious Diseases, Division of Bacterial and Mycotic Diseases, Foodborne and Diarrheal Diseases Branch.)

Typically, the appropriate procedure for physicians to follow in reporting foodborne illnesses is to contact the local or state health department whenever they identify a specific notifiable disease. However, it is often unclear if a patient has a foodborne illness prior to diagnostic tests, so physicians should also report potential foodborne illnesses, such as when two or more patients present with a similar illness that may have resulted from the ingestion of a common food. Local health departments then report the illnesses to the state health department and determine if further investigation is warranted.

In addition to reporting cases of potential foodborne illnesses, it is important for physicians to report noticeable increases in unusual illnesses, symptom complexes, or disease patterns (even without definitive diagnosis) to public health authorities. Prompt reporting of unusual patterns of diarrheal/gastrointestinal tract illness, for example, can allow public health officials to initiate an epidemiologic investigation earlier than would be possible if the report awaited definitive etiologic diagnosis.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

Not applicable

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

General benefits include:

- Prevent and control food-related disease outbreaks.

Specific benefits include:

- Foodborne disease reporting is not only important for disease prevention and control, but more accurate assessments of the burden of foodborne illness in the community occur when physicians report foodborne illnesses to the local or state health department. In addition, reporting of cases of foodborne illness by practicing physicians to the local health department may help the health officer identify a foodborne disease outbreak in the community. This may lead to early identification and removal of contaminated products from the commercial market. Occasionally, reporting may lead to the identification of a previously unrecognized agent of foodborne illness. Reporting also may lead to identification and appropriate management of human carriers of known foodborne pathogens, especially those with high-risk occupations for disease transmission such as foodworkers.

Subgroups Most Likely to Benefit:

Young, elderly, and immunocompromised patients

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

This primer is not a clinical guideline or definitive resource for the diagnosis and treatment of foodborne illness. Safe food handling practices and technologies (e.g., irradiation, food processing and storage) also are not addressed.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Staying Healthy

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Diagnosis and management of foodborne illnesses: a primer for physicians. MMWR Recomm Rep 2001 Jan 26;50 (RR-2):1-69. [95 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

Reprint released 2001 Jan

GUIDELINE DEVELOPER(S)

American Medical Association - Medical Specialty Society
Center for Food Safety and Applied Nutrition - Federal Government Agency [U.S.]
Centers for Disease Control and Prevention - Federal Government Agency [U.S.]
Food Safety and Inspection Service - Federal Government Agency [U.S.]

GUIDELINE DEVELOPER COMMENT

This primer was developed collaboratively by the American Medical Association, the Centers for Disease Control and Prevention (CDC), the Center for Food Safety and Nutrition, Food and Drug Administration (U.S.), and the Food Safety and Inspection Service, Department of Agriculture (U.S.) as part of the National Food Safety Initiative implemented under former President William Jefferson Clinton.

SOURCE(S) OF FUNDING

United States Government

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Writing/Working Group Members: American Medical Association: LJ Tan, PhD (Working Group Chair); Jim Lyznicki, MS, MPH Centers for Disease Control and Prevention: Penny M. Adcock, MD; Eileen Dunne, MD, MPH; Julia Smith, MPH Center for Food Safety and Applied Nutrition, U.S. Food and Drug Administration: Eileen Parish, MD; Arthur Miller, PhD, Howard Seltzer Food Safety and Inspection Service, U.S. Department of Agriculture: Ruth Etzel, MD, PhD

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

Please note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary.

GUIDELINE AVAILABILITY

Electronic copies of the updated guideline: Available from the [Centers for Disease Control and Prevention \(CDC\) Web site](#).

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on May 8, 2001.

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